

What is claimed is:

1. In a magnetoresistive effect element in which a pair of ferromagnetic material layers is opposed to each other through an intermediate layer to obtain a magnetoresistive change by causing a current to flow in the direction perpendicular to the layer surface, a magnetoresistive effect element characterized in that one of said ferromagnetic material layers is a magnetization fixed layer and the other ferromagnetic material layer is a magnetization free layer, said magnetization free layer is made of a ferromagnetic material containing FeCoB or FeCoNiB and that said magnetization free layer has a film thickness ranging from 2 nm to 8 nm.

2. A magnetoresistive effect element according to claim 1, wherein said magnetoresistive effect element is a tunnel magnetoresistive effect element using a tunnel barrier layer made of an insulating or semiconductor material as said intermediate layer.

3. A magnetoresistive effect element according to claim 1, wherein said magnetoresistive effect element has a laminated ferri structure.

4. In a magnetic memory device comprising a magnetoresistive effect element designed in such a manner that a ferromagnetic tunnel junction sandwiching a tunnel barrier layer is formed between a pair of ferromagnetic material layers to cause a current to flow in the direction perpendicular to the layer surface and word lines and bit lines sandwiching said magnetoresistive effect element in the thickness direction, a magnetic memory device characterized in that one of said ferromagnetic material layers is a magnetization fixed layer and the other ferromagnetic material layer is a magnetization free layer; said magnetization free layer is made of a ferromagnetic material containing FeCoB or FeCoNiB and said magnetization free layer has a film thickness ranging from 2 nm to 8 nm.

5. A magnetic memory device according to claim 4; wherein said magnetoresistive effect element is a tunnel magnetoresistive effect element using a tunnel barrier layer made of an insulating or semiconductor material as said intermediate layer.

6. A magnetic memory device according to claim 4, wherein said magnetoresistive effect element has a laminated ferri

structure.